UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 4
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8 June 2009

Ms. Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First St., NE, Room 1A
Washington, DC 20426

SUBJECT: Draft Environmental Impact Statement (DEIS) for Florida Gas Transmission's (FGT) Phase VIII Pipeline Expansion Project, OEP/DG2E/Gas 1 FGT Company Docket No. CP09-17-000; CEQ No. 20090122, ERP No. FRC-E03019-00

Dear Ms. Bose:

To fulfill EPA's Clean Air Act (CAA) § 309 and National Environmental Policy Act (NEPA) § 102(2)(C) responsibilities, EPA is enclosing its comments regarding the above DEIS for the proposed action: FGT's Phase VIII Pipeline Expansion Project. Under § 309, EPA is directed to review and comment publicly on the environmental impacts of Federal activities, including actions for which environmental impact statements are prepared.

EPA commends FERC on its efforts and appreciates the difficulty in compiling such a comprehensive and concise EIS for this complex project. EPA supports the Project's objective to minimize the length of new pipeline to be constructed and maximize its co-location adjacent to existing linear infrastructure and the use of existing access roads through wetland areas in lieu of constructing new ones. We are rating the DEIS an EC-2, environmental concerns (EC) – insufficient information (2), see enclosed "Summary of the EPA Rating System." Because of the project's complexities and the impacts to a variety of landscapes, land uses, water bodies, and habitats, several concerns and recommendations have been identified in the enclosed comments and highlighted below.

Background

Description: the proposed action will involve construction and operation of about 483.2 miles of multi-diameter pipeline and associated pipeline support facilities and the acquisition of 22.7 miles of lateral pipeline. Approximately 357.3 miles of pipeline will consist of looping existing facilities, about 25.9 miles of looping segment would involve the removal and replacement of previously abandoned 24-inch diameter pipeline, and the remaining 125.9 miles will consist of new or "Greenfield" construction in three segments. Approximately 59.0 miles will lie in Alabama and 424.2 miles in Florida. Included is the addition of compression and acreage at eight existing compressor stations plus the construction of one new compressor station, three new metering and pressure regulating (M&R) stations and one new regulator station, and upgrades to two existing M&R stations plus construction of auxiliary and

appurtenant facilities. The new pipeline facilities are proposed to be designed and operated at the maximum allowable operating pressure (MAOP) of 1,333 pounds per square inch gauge.

Purpose & Need: to meet the expanding demand for natural gas to meet the State of Florida's electric generation needs while minimizing the length of new pipeline to be constructed and maximizing its co-location adjacent to existing linear infrastructure. The Proposed Action would increase FGT's certificated capacity by about 820 million cubic feet per day (MMcf/d) and provide: a connection between the FGT's East Leg (mainline) and its West Leg pipelines, an additional natural gas pipeline service to Florida Power & Light's (FPL) Martin County Power Plant (PP) and Turkey Point PP (Miami-Dade County), and a new natural gas service to both FPL Manatee and Suwannee County PPs.

FGT proposes to begin construction in January of 2010 and has contractual commitments to complete construction of the Greenfield 2 segment and the associated M&R station by July 1, 2010 and the remainder of the Project by April 2011.

Alternatives: evaluated alternatives included the *No Action* or Postponed Action Alternative, system alternatives, route alternatives, route variations, and aboveground-facility site alternatives. Five existing or proposed pipeline/gas delivery systems were evaluated as system alternatives but each was determined insufficient for reasons of untimely completion and/or capacity and infrastructure limitations. One evaluated operation alternative involved replacing existing operational pipelines with larger diameter pipe, which was rejected due to the unavailability of temporary detours to facilitate continued service during the replacement. A "Cross-Gulf Route" alternative traversing 425 miles of the Gulf of Mexico was identified as the environmentally preferable alternative in terms of onshore impacts (33 percent less onshore pipeline). However the offshore impacts, 260 miles of added pipeline, and the doubled cost eliminated it from consideration. Other route alternatives evaluated included four alternative routes for Greenfield 1 and two alternative routes for Greenfield 3 and all were eliminated from further consideration because: pipeline length, collocation inabilities, and greater environmental impacts.

Additionally, numerous route variations for looping and Greenfield segments were evaluated and included: modified construction methods to avoid or minimize impacts and address scoping-identified issues. FGT incorporated many of these variations into its project design, including crossovers of existing pipelines, reduced construction workspaces, working over the existing pipelines for short distances, and alternative construction methods such as HDD. Construction, engineering, or operationally infeasible and impracticable variations were rejected. Additionally, energy conservation (insufficient offset), alternative fuels (untimely to meet demand), and renewable resources (uncompetitive economically) alternatives were all rejected as unreasonable.

Environmental Impacts:

Land use - the major land-cover types to be impacted by the proposed action is expected to be 1,726.6 acres of agricultural land, 1,006.3 acres of forested land, 928.4 acres of open land, 717.7 acres of pine plantation, 1,744.7 acres of commercial/industrial, residential, or open water lands. The construction of aboveground facilities is expected to have the greatest impact to forested land, followed by open land, and agricultural land. The access road improvements

are expected to have a minor impact on land-cover types. And the proposed 15 contractor and pipe storage yards will primarily affect agriculture land or commercial/industrial land.

With the exception of 151 acres of citrus groves, agricultural and open lands will return to their previous use. Forested land and pine plantations will be allowed to re-vegetate to their previous use within the temporary right-of-way; however, this will likely be a long-term impact given both the length of time trees grow and the maintenance of a permanent right-of-way through these areas in an herbaceous or scrub vegetative state.

The DEIS indicates to the extent feasible, FGT has proposed that the proposed action will parallel other rights-of-way such as utility and road corridors and will use portions of the existing cleared rights-of-way during construction. Thereby theoretically reducing the overall environmental impacts associated with clearing, especially through forested areas.

Noise – EPA finds the noise section to be comprehensive. Project noise sources primarily include operating compressor stations (mostly existing stations to be modified plus one proposed new station) and construction noise from horizontal directional drilling (HDD), although general construction, pipeline placement, and other sources would also exist along the pipeline right-of-way. EPA appreciates that both construction and operational noise impacts were evaluated, local noise ordinances were considered, a noise threshold of 55 dBA Day-Night Level (DNL) was used to assess impacts at nearby noise sensitive areas (NSAs) such as residences, and noise mitigation was planned for nearby NSA receptors.

Water Resources - the Proposed Action will cross 388 surface-water bodies. While one water body is classified as a potable water supply, its withdrawal location is greater than three miles from the Proposed Action. These water bodies are all warm-water fisheries, primarily freshwater except for three estuarine systems. Two hundred and eighty-five streams are classified as perennial. Thirteen are wider than 100 feet and twelve will be crossed using HDD. Additionally, water from several different rivers, creeks, lakes, canals, and ponds, will be used for pipeline hydrostatic testing.

Wetlands - the Proposed Action will cross 196 high-quality (230 acres), 818 moderate-quality (458 acres), and 349 low-quality (142 acres) wetland assessment areas. Project construction will temporarily disturb 830 acres of wetlands and cross 917 wetland systems for 84 pipeline miles. The proportion of impacts to wetland types is anticipated to be 41 percent palustrine forested, 34 percent palustrine emergent, 20 percent palustrine scrub-shrub, and about 4 percent estuarine scrub-shrub.

The impacts to palustrine forested wetlands are expected to be significant due to the combination of tree growth rates and maintenance and inspection requirements for 94 acres to be kept as scrub-shrub or emergent wetlands. Because vegetation will otherwise be allowed to transition back into a pre-construction condition, the impact to palustrine emergent and scrub-shrub wetlands is expected to be temporary. However about 0.07-acre of palustrine emergent wetlands will be permanently filled associated with the installation of an aboveground tie-in valve for Loop 11. Additionally, estaurine scrub-shrub mangroves will be impacted only in the Loop 11 section. Palustrine open water wetlands will constitute less than one percent of the wetland area temporarily impacted.

Wetland impacts are to be limited by 1) reducing the width of the construction right-of-way, 2) implementing appropriate procedures, 3) complying with the conditions of CWA 404 permits and other applicable authorizations, and 4) overlapping construction right-of-ways, including extra workspaces, on adjacent power line corridors to the extent practicable. Additionally, the HDD method will be used to cross 40 wetland areas. Existing access roads through wetland areas will be used in lieu of constructing new ones. FGT will purchase mitigation credits from approved wetland banks to offset the temporary and permanent loss of wetland function within forested and scrub-shrub wetlands in accordance with COE and state approvals.

EPA Concerns

Reasonable alternatives: NEPA regulations provide that an EIS shall provide full and fair discussion of significant environmental impacts and shall inform decision-makers and the public of the reasonable alternatives which would avoid or minimize adverse impacts or enhance the quality of the human environment and require an EIS to rigorously explore and objectively evaluate all reasonable alternatives including reasonable alternatives not within the jurisdiction of the lead agency.[1]

While EPA acknowledges FERC's efforts at a comprehensive alternatives analysis, we believe a reasonable alternative has been omitted from each of the "System" and "Route Variation" alternatives and impacts analyses. First, the final EIS (FEIS) should include Florida Power & Light (FPL) Company's proposed east-coast natural gas pipeline (*Florida EnergySecure Line*) from Bradford County to FPL's Martin County Power Plant as part of its "System" alternatives analysis. Second since the DEIS states the use of the HDD method to minimize wetland impacts would actually increase impacts to mangrove habitat[2] for preferred Loop 11 route variation, the FEIS should include a review of other alternative pipeline routes to the west that would avoid impacts to these mangrove wetlands. Additionally, we believe the Levy County nuclear power plant represents a potential energy-supply alternative that should also be addressed in the FEIS.

Alternatives analysis: NEPA regulations provide that an EIS should present the environmental impacts of the proposal and the alternatives in comparative form, thus sharply defining the issues and providing a clear basis for choice among options by the decision-maker and the public.[3]

While EPA acknowledges FERC's efforts at a providing the alternatives analysis in a comprehensive and comparative form, we believe the analysis is incomplete resulting in an unclear basis for choice for informing the decision-maker and the public. EPA's concern is on the proposed Greenfield #1 Route Alternative. The FEIS should provide the necessary detail on the proposed Greenfield route and how it was selected over the four alternatives reviewed. EPA was unable to fully determine from the DEIS the comparative alternative environment impacts. Moreover the selected route proposes the greatest wetland impacts compared to the

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[1] 40 CFR §§ 1502.1, 1502.14(a) & 14(c).
[2] P. 3-28.
[3] 40 CFR § 1502.14

other alternatives, which is inconsistent with EPA's wetland program goals of increasing the quantity and quality of wetlands by conserving and restoring wetland acreage and improving wetland health. Consequently because Alternative A proposes no wetland impacts and would avoid a HDD crossing of the Suwannee River, which is critical habitat of the Gulf Sturgeon, the FEIS should provide an expanded review of Alternative A.

- **Environmental impacts – noise:** regarding FGT's plan to sound-proof compressor stations, EPA requests the existing Station 15 be mitigated for noise by upgrading any existing old/noisy compressor units. Regarding FERC staff's recommendation to monitor actual compression-station noise levels to ensure adequate attenuation, EPA suggest this be done for HDD noise too. For the HDD sites, EPA supports FGT's proposed shielding and relocation of equipment to attenuate noise and FERC staff's recommendation for a supplemental noise study (i.e., daytime data needed) where nighttime data currently predict levels above the FERC threshold.

  In some instances even after mitigation, attenuated noise levels may still be elevated. Inasmuch as the FERC threshold criterion of 55 DNL would be exceeded, EPA recommends additional mitigation through onsite shielding or other means. Additionally, EPA recommends the FEIS should contain a construction timeframe and provide documented noise levels associated with construction equipment anticipated to be used for the project.

- **Environmental impacts – water quality (herbicide use):** EPA finds the DEIS unclear regarding whether herbicides will be used in construction and/or maintenance of right-of-ways. Since herbicides such as gylphosate can enter surface waters by direct application to aquatic vegetation, binding to soil that washes off treated terrestrial sites, or through drift from treated areas, EPA is concerned that an herbicide BMP to protect water quality and associated ecology be developed, used, and included as a specific condition in the Commissioner's order.

- **Environmental impacts – water quality (hydrostatic testing):** EPA is concerned with the potential for adverse impacts to surface waters resulting from the withdrawal of large volumes of water in a relatively short period of time. EPA recommends the FEIS address these potential impacts for all water bodies, and their associated ecologies, designated as hydrostatic-test source waters. Additionally, EPA is concerned that the proposed hydrostatic-testing plan should be expanded to include provisions minimizing impacts to the source for testing water.

- **Environmental impacts – water quality (invasive aquatic-species):** EPA is concerned with the potential for the transfer of invasive aquatic species via the hydrostatic-testing equipment from one water body to another. Consequently, EPA recommends the FEIS discuss this potential and respectfully requests FERC to specify measures to prevent this water impact as a specific condition in the Commission's order.

- **Environmental impacts – wetlands:** EPA is concerned with the potential for unnecessary wetland impacts and requests the placement of the pipeline 15 feet from the nearest adjacent pipeline in all sensitive wetland areas; all pipeline installation be conducted within a 75-foot right-of way; the prohibition of the timber-disposal method where chips are left

on the right-of-way and may inhibit the re-growth of wetland vegetation; all wetland crossings be stabilized with mats prior to any crossing; and clay-seepage collars be used to support the pipeline instead of bedrock which may serve to drain the impacted wetland system.

- **Environmental impacts – conflicts with State plans and policies:** NEPA regulations require the environmental consequences section to include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, State, and local land use plans, policies and controls for the area concerned.[4] And as an effort to improve integration of environmental impact statements into State or local planning processes, NEPA regulations,[5] require an EIS to discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned).

  EPA recommends the FEIS discuss the Proposed Action's consistency with the State of Florida's Energy Security and Climate Change Action Plan goals and recommendations and with the State's Energy Plan. There appear to be inconsistencies between the proposed action and the State's plans, policies, and controls that the FEIS should address.

Commission's Order

Consistent with 40 CFR § 1500.2 (f), *use all practicable means, consistent with the requirements of the Act and other essential considerations of national policy, to restore and enhance the quality of the human environment and avoid or minimize any possible adverse effects of their actions upon the quality of the human environment*, EPA respectfully requests FERC to consider a number specific conditions be attached to the Commission's order. These requests are detailed in the enclosed comments.

Conclusion

Thank you for the opportunity to review this DEIS and our comments are enclosed. When the FEIS is published, please send one hard copy to us at the above address. If you wish to discuss this matter further, please contact Beth Walls (404-562-8309 or walls.beth@epa.gov) of my staff.

Sincerely,

Heinz J. Mueller, Chief
NEPA Program Office
Office of Policy and Management

Enclosures: Summary of EPA's rating system
EPA Region 4's detailed comments

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[4] 40 CFR § 1502.16.
[5] § 1506.2(d).

PURPOSE & NEED

- Levy County nuclear power plant: the FEIS should include a thorough review of this newly proposed power plant in terms of both the proposed action's purpose and need and an energy-supply alternative.

- Proposed need: when discussing the evaluation criteria for selecting potentially environmentally preferable alternatives, the DEIS describes four criteria and the fourth criteria concerns satisfying FGT's precedent agreements, which require the capability to deliver natural gas to four power plants in Florida no later than spring 2011. As written, the purpose and need for this license appears to be drive by FGT's contractual commitments, e.g., FPL requested Greenfield 2 be completed and put in service by July 2010. EPA reminds FERC of two NEPA regulations: 1) [a]*gencies shall not commit resources prejudicing selection of alternatives before making a final decision*[1]; and 2) [e]*nvironmental impact statements shall serve as the means of assessing the environmental impact of proposed agency actions, rather than justifying decisions already made.*[2] And suggests FERC reassess its NEPA process to insure it is not providing any opportunity to put itself in a position inconsistent with NEPA's requirements.

ALTERNATIVES

- *Florida EnergySecure Line*: the FEIS should include a thorough review of the Florida Power & Light (FPL) Company's proposed east-coast natural gas pipeline (*Florida EnergySecure Line*) from Bradford County to FPL's Martin County Power Plant.[3] EPA recommends the FEIS include this review in Section 3.2, Systems Alternatives.[4] This recommendation also includes the need to review of the *Florida EnergySecure Line* alternative for providing natural gas to the Martin County Power Plant in Subsection 3.3.2.3, Greenfield 3.[5] According to FPL, the purpose of EnergySecure is to provide an alternative natural gas supply source in lieu of over reliance on the Gulf of Mexico, e.g., Hurricane Katrina.

- Greenfield 1 route variation: the DEIS lacks detail on the proposed route and how it was selected over the four alternatives reviewed. Therefore, EPA is unable to fully determine the comparative environmental impacts of the proposed action and the alternatives.[6] Table 3.3.2-1 indicates the selected route will realize the greatest wetland impacts compared to the four other alternatives.[7] Consequently, EPA recommends the FEIS consider a further review of

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[1] 40 CFR § 1506.1(f).
[2] 40 CFR § 1506.1 (g).
[3] The NEPA regulations (40 CFR § 1502.14(a)) require the alternatives section of an EIS to rigorously explore and objectively evaluate all reasonable alternatives including reasonable alternatives not within the jurisdiction of the lead agency § 1502.14(c)).
[4] Pp. 3-5 – 3-16.
[5] Pp. 3-19 – 3-22.
[6] NEPA regulations (40 CFR § 1502.14) require the EIS "*to present the environmental impacts of the proposal and the alternatives in comparative form, thus* ***sharply defining the issues and providing a clear basis for choice among options by the decision maker and the public.***"
[7] Pp. 3-16 – 19.

Alternative A as it proposes no wetland impacts and would avoid a horizontal directional drilling (HDD) crossing of the Suwannee River, which is critical habitat of the Gulf Sturgeon.

- Loop 11 route variation: the DEIS states that the use of the HDD method to minimize wetland impacts in Loop 11 would actually increase impacts to mangrove habitat.[8] Consequently, EPA recommends the FEIS include a review of other alternative pipeline routes to the west, which would avoid impacts to mangrove wetlands.

- Energy conservation alternative: the DEIS dismissed this alternative as long-term and beyond the timeframe of the need for the Project. According to FERC "[u]*ntil such time that the energy conservation programs offered by FPL and other Florida utilities are implemented by a majority of residential customers, energy conservation is not a suitable alternative to FGT's Project.*[9]"

  EPA recommends the FEIS discuss this decision in context of and perhaps inconsistency with the State of Florida's Energy Security and Climate Change Action Plan, which states because residential users use over 52 percent of the electricity generated in Florida and represent opportunities at the consumer level for conservation and energy savings, conservation can be done immediately and forestall the need for new power plants.[10]

ENVIRONMENTAL IMPACTS

NOISE

- Noise threshold at NSAs: EPA appreciates that FERC has adopted a noise threshold of 55 DNL at nearby noise sensitive areas (NSAs) as indicated by DEIS, [w]*e have adopted this criterion and use it to evaluate the potential noise impact from operation of each of the proposed compressor stations.*[11] However only "project-only" and "project-plus-ambient" (total) noise data were generated at nearby NSAs. It is unclear whether the "project-only" or the "project-plus-ambient" noise level is considered critical for consistency with the 55 DNL threshold for nearby NSAs. Consequently, EPA recommends the FEIS clarify which noise level is critical to this threshold and EPA recommends the "project-plus-ambient" noise level be critical for consistency with the 55 DNL threshold.

- Cumulative impacts: since the DEIS does not consider the cumulative noise impacts[12] in the proposed area, EPA recommends the FEIS incorporate this discussion.

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[8] P. 3-28.
[9] P. 3-2.
[10] Phase 1 Report: Florida's Energy and Climate Change Action Plan Pursuant to Executive Order 07-128, p. 12.
[11] P. 4-243.
[12] An EIS shall include discussions of direct and indirect effects and their significance, 40 CFR § 1502.16. "Effects" include ecological, aesthetic, historic, cultural, economic, social, or health, whether direct, indirect, or cumulative, 40 CFR § 1508.8.

- Noise metrics background: the Federal Integrated Committee On Noise (FICON) studies indicate small increases in Day-Night Levels (DNLs) can be significant (i.e., the DNL is an averaged value rather than an instantaneous reading). For example, a +1.5 DNL increase within a 65-DNL ambient level (e.g., 65 DNL contour surrounding airports) is considered a significant increase. Furthermore, a +3.0 DNL increase is considered significant in a 60 DNL environment. Consequently, EPA recommends the FEIS disclose this in its background information.

- L10-to-Leq conversion factor: the DEIS indicated L10 noise levels should be comparable to Leq levels for short periods of continuous noise.[13] Both compressor and HDD noise is often continuous but having a longer period. Consequently, EPA recommends the FEIS provide some L10-to-Leq conversion factor to the extent it is available, and an hour value should be assigned to the Leq value used, such as Leq(1) or Leq(12) for a one-hour or 12-hour average, respectively.

- Modeled operational compressor station noise: the CadnaA model was used for operating compressor stations. The CadnaA software considers the listed site factors[14], such as shielding and ground attenuation.[15] EPA recommends the FEIS provide accreditation for this model and identify the version used.

- Excessive existing ambient compressor station noise: calculated DNL indicates noise levels at Station 15 exceed[16] the 55-DNL threshold at three NSAs. Since the ambient noise at Station 15 appears to be dominated by the existing, old reciprocating compressor units at its compressor station,[17] EPA recommends either these units be replaced or Station 15 be modified with insulating materials to reduce noise levels at the three receptors. Moreover, the associated repowering this station may provide an opportunity for noise conformity. EPA respectfully requests FERC add a noise mitigation measure for Station 15, e.g., replacing old, noisy compressor units or adding insulating materials, as a specific condition in the Commission's Order.

- Excessive existing ambient new station noise: the ambient data for the proposed new station, Number 29, indicate existing levels for one of the NSAs[18] already exceeds this threshold while two others are near the threshold. Since existing ambient, non-project noise levels are high at the proposed new Station 29, EPA recommends the added compressor station noise should not significantly raise the noise level, especially at the NSA where the ambient is already 61.8 DNL and the new station's noise is predicted to contribution an additional 43.9 DNL. Consequently where attenuated levels at some NSAs are expected to exceed threshold levels after the proposed mitigation, EPA respectfully requests FERC add further mitigation measures, e.g., onsite shielding or other means, as a specific condition in the Commission's Order to reduce these levels below or at threshold.

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[13] P. 4-243.
[14] P. 4-251.
[15] The FEIS should define "ground attenuation". That is, is this attenuation by distance or does it account for hard and soft interferences such a buildings, boulders and trees specific to each compressor station site?
[16] DNL levels were 56.7, 59.7 and 66.2.
[17] P. 4-246.
[18] DNL level reported at 61.8.

- Additional mitigation: the DESI states that "*...the proposed compressor station modifications and the new compressor station would result in total noise levels below the FERC requirement of 55 dBA Ldn.*[19]" Although accurate overall, given the total noise information for Stations 15 and 29, this statement should be revisited in the FEIS. Inasmuch as FERC has adopted the 55 DNL threshold, EPA recommends those remaining elevated noise levels for Station 15 and several HDD sites reference above be further considered for mitigation. Preferred mitigation methods would be source reduction (compressor units and HDD equipment technology) or onsite shielding (sound-proofing of station housing or shielding of HDD equipment). EPA agrees with the FERC staff's recommendation for FGT monitoring of proposed mitigation for compressor stations (EPA also recommends monitoring for HDD work) to ensure attenuation at selected NSAs that are predicted to be mitigated to within the FERC criterion.[20]

- Unmitigated HDD Operational Noise: since only nighttime noise data were gathered, it appears no mitigation is planned for some of the HDD sites with elevated existing noise levels.[21] The DEIS is unclear why daytime measurements and corresponding mitigation proposals are lacking. EPA supports FERC's recommendation that a supplemental HDD noise analysis be completed and filed before the DEIS' public comment period ends.[22] EPA requests FERC'S recommendation, "[t]*his supplemental report should provide any noise mitigation measures FGT would commit to implement to reduce noise levels*," be incorporated into the FEIS to clearly indicate mitigation should be implemented when the NSAs' noise levels are elevated above the 55 DNL threshold.

- Timeframe: although construction impacts are temporary, the FEIS should include a project construction timeframe (in months, years) to help gauge the magnitude of the construction impact for the affected residents. Preferably, timeframes for typical HDD work at entry and exit sites (a range may be appropriate since HDD work will vary by river width and sub-aquatic geology) as well as pipeline placement near any given residence, would also be helpful to nearby residents.

- Construction Equipment: although the noise section is well documented, the FEIS should add noise data from the literature of typical earth-moving construction equipment (bulldozers, trucks, graders, etc.) that can be expected to be used in pipeline ROW clearing and placement.

- Mitigation: EPA thinks FGT/FERC's proposed mitigation at HDD sites (e.g., temporary noise barriers and relocating equipment) are good approaches worthy of use, as feasible for the project in general, i.e., for most construction sites, even where levels are estimated to be less than 55 DNL at NSAs. This would help shield noise originating from stationary sources such as pumps and drilling equipment to reduce the overall noise impact of the project (e.g., portable equipment shields such as "hush houses"). EPA also strongly supports the

[19] P. 4-256.
[20] Id.
[21] I.e., 60.2, 59.6, 59.4, 57.1 and 59.7 DNL.
[22] P. 4-251.

acoustical construction (sound-proofing) of compressor stations as discussed.[23] These include insulated walls, roofs and silencers on electric driven[24] compressor units. As suggested above, this should particularly be considered for Compressor Station 15 where old/noisy compressor units still exist assuming they are not replaced.

WATER QUALITY

- Herbicide use: EPA finds the DEIS unclear regarding whether herbicides will be used in construction and/or maintenance of right-of-ways. While the DEIS states that vegetation would be removed by mechanical cutting or by hand,[25] it does not specifically rule out the use of herbicides in clearing vegetation. Furthermore, the DEIS suggests that herbicide use is part of its Noxious Weed Management Plan[26] but the actual plan described in Appendix E does not directly speak to the use of herbicides as a treatment method. EPA recommends the FEIS clarify the use of herbicides, the associated potential environmental impacts -- particularly water quality, associated with the proposed action.

- Glyphosate use: glyphosate is generally considered to be an environmentally-friendly herbicide as it is considered to be only slightly toxic to birds, fish, and aquatic invertebrates, and not expected to bioconcentrate; however, it is not commonly monitored in current agricultural chemical studies. Moreover, some studies suggest that some of the surfactants used in glyphosate formulations are more toxic to wildlife than the actual glyphosate.[27] In short, this herbicide is not well studied and the implications of its widespread use remain to be discovered whenever funding is made available for that purpose.[28]

  Because of glyphosate's non-selectivity, its use had been limited to non-cropland, fallow, and no-till burndown treatments since its introduction in 1974. With the introduction of Roundup-Ready crops and the subsequent reduction in glyphosate price, its use dramatically increased to widespread in the late 1990s as an important and primary method of controlling

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[23] Id.

[24] We also support the use of electric units from an air quality perspective. The FEIS should discuss if all upgrades and new units (Station 29) will be electric- or diesel-driven.

[25] P. 4-55.

[26] E.g., the EIS states that the Apalachicola National Forest -approved herbicides include post-emergent systemics such as Glyphosate, see p. 4-61.

[27] E.g., glyphosate and the surfactant polyoxyethylene amine (POEA) may be toxic to microalgae and crustaceans. A glyphosphate-based forestry herbicide, Vision® may realize a statistically significant reduction in the survival of adult amphibians. Some glyphosate-based herbicide formulations may cause tail malformations and gonadal abnormalities in tadpoles and frogs. See: Battaglin, W.A., *et al.*, *Glyphosate, Other Herbicides, and Transformation Products in Midwestern Streams* (2002) Journal of the American Water Resources Association, April 2005, Paper No. 04024. See: http://co.water.usgs.gov/midconherb/pdf/WREB_4102_323-332.pdf

[28] A 2002 USGS Midwestern-stream study findings suggest that the dominant source of glyphosate in tested water bodies was runoff, it can persist for a long time in soils and sediment, where it may remain susceptible to mobilization after rainfall, and glyphosate may be more mobile and persistent in aquatic environments than earlier research and monitoring have suggested. See: Battaglin, W.A., *et al.*, *Glyphosate, Other Herbicides, and Transformation Products in Midwestern Streams* (2002) Journal of the American Water Resources Association, April 2005, Paper No. 04024. See: http://co.water.usgs.gov/midconherb/pdf/WREB_4102_323-332.pdf

weeds. This heavy reliance on glyphosate has led to both shifts in weed species and development of glyphosate-resistant weeds.

Because some weeds naturally do not respond to glyphosate and other weeds appear to have an inherited ability to survive and reproduce following a normally lethal exposure to most members of that species, a rotated herbicide treatment method may be necessary and appropriate to the careful management of glyphosate. Consequently, EPA recommends judicious and careful management of this herbicide's use both to optimize and maintain its performance, particularly in agricultural areas,[29] and minimize exposure to water quality and the associated ecology.

- Herbicide BMP: since herbicides such as gylphosate can enter surface waters by direct application to aquatic vegetation, binding to soil that washes off treated terrestrial sites, or through drift from treated areas and can water quality,[30] EPA recommends the development and use of an herbicide BMP to protect water quality and associated ecology.

  Careful management implies using herbicides effectively and efficiently in that herbicide adsorption and weed control generally are greater with higher humidity levels; high nighttime and early-morning humidity may cause heavy dew, which may negatively impact weed control; rainfall soon after an application can wash herbicide off plant foliage and reduce weed control. Weed control with glyphosate is often lower early in the morning or in the evening as compared to midday applications. Furthermore, wind is an important consideration in preventing drift.[31]

  Consequently considering the extensive scope of this project EPA respectfully requests FERC, as specific conditions in the Commission's Order, to encourage alternatives to herbicide use,[32] discourage the liberal and encourage selective use of herbicides, and add the mitigation measure: herbicide BMP development and implementation.

- Hydrostatic testing: the DEIS correctly notes the withdrawal of hydrostatic test water from surface water sources could temporarily affect the recreational and biological use of the water body if the diversion were to constitute a large percentage of the source's total flow or volume.[33] EPA is concerned with the potential for adverse impacts to surface waters resulting from the withdrawal of large volumes of water in a relatively short period of time.

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[29] Glyphosate Stewardship: Optimizing and Preserving Glyphosate Performance, a Kansas State University Agricultural Experimental Station and Cooperative Extension Service publication, see: http://www.oznet.ksu.edu/library/crps/2/mf2767.pdf

[30] Backgrounder Glyphosate and Water Quality, November 2003, see: http://www.monsanto.com/monsanto/content/products/productivity/roundup/gly_water_bkg.pdf

[31] Glyphosate Stewardship: Optimizing and Preserving Glyphosate Performance, a Kansas State University Agricultural Experimental Station and Cooperative Extension Service publication, see: http://www.oznet.ksu.edu/library/crps/2/mf2767.pdf

[32] EPA brings to FERC's attention the use of goats by highway departments in Maryland, Colorado, and New York for controlling plant growth, protecting designated sensitive species, and reducing CO_2 emissions associated with mechanized plant control methods, see: http://www.cnn.com/2009/US/05/27/maryland.highway.goats/

[33] P. 4-41.

However, the DEIS lacks any total flow or volume information for any of the water bodies listed as a hydrostatic-testing source water. Also lacking is a discussion of the water-withdrawal impacts to these water bodies in terms of their flow, volume, ecology, and downstream impacts. Potential impacts to aquatic species could include increased water temperatures, reduced dissolved oxygen levels, and entrainment at the water intakes. Moreover, source-water impacts would likely be aggravated by seasonal considerations and extended drought situations.

For example, the DEIS indicates test-water withdrawal rates should not exceed 690 gallons-per-minute (gpm)[34] and 9,911,112 gallons of water would be required to be withdrawn from Bee Tree Pond[35] to hydrostatically test the relevant section of pipeline. This indicates that ten continuous days, or 240 hours, at a rate of 690 gpm of water will be withdrawn from this Pond. Absent is a discussion of the associated impacts to this Pond or whether this degree of withdrawal will occur during the dry season or during an extended drought.

Consequently, EPA recommends the FEIS address these potential impacts for all water bodies, and their associated ecologies, designated as hydrostatic-test source waters.

- Hydrostatic testing: the DEIS does not discuss whether the sulfate concentrations of the source waters may promote growth of sulfate-reducing bacteria and lead to corrosive hydrogen sulfide and carbon dioxide gas generation requiring protective chemical treatment of the pipeline will be an issue. If so, then how will the potential for adverse impacts to water quality be addressed? EPA recommends the FEIS address this issue and incorporate, as appropriate, into the proposed hydrostatic testing plan mentioned in the DEIS.

- Hydrostatic testing plan: the DEIS indicates a hydrostatic testing plan identifying potential water source and discharge locations for the pipeline facility will be developed.[36] EPA recommends this testing plan be expanded to include the following provisions:
  - Pump intakes should minimize disturbance to the stream bed. The intake hose and screen should be kept off the water-body bottom.
  - Pumps and hoses used to withdraw water from the water body should be located to avoid bed erosion and minimize vegetation disturbance.
  - Pump intakes should be screened to minimize the entrainment and mortality to fish and other aquatic organisms inhabiting the water column. The water intake screen should be regularly inspected for entrained fish and the USFWS (and the state equivalent agency) should be contacted immediately if a federally (state) listed species are found impinged on the screen.
  - During hydrostatic test water withdrawals, adequate flow rates should be maintained in the water body to protect aquatic life and provide for downstream uses unless otherwise directed by the appropriate authority. Drought conditions should be addressed in this plan.

[34] P. 4-40.
[35] P. 2-19.
[36] P. 2-18.

- Intake and discharge locations should be monitored to insure no erosion, flooding, or other detrimental impacts occur.
- Dewatering directly back into a water course or body should be avoided unless otherwise directed by the appropriate authority.
- Water discharge from the pipeline will be done in a manner to avoid causing damage, pollution, or flooding.
- Water bodies where sensitive species are located should be avoided unless otherwise directed by the appropriate authority.
- Test water should be returned back to its source watershed to prevent the inner-basin transfer of aquatic organisms, unless otherwise directed by the appropriate authority, even though there are no plans to discharge the test water back into the water source.
- Construction and other equipment refueling should be conducted a minimum distance of 100 feet from any water body and wetlands.

Consequently, EPA respectfully requests FERC add a hydrostatic testing plan containing at a minimum the above protective measures as a specific condition in the Commission's Order.

- Invasive aquatic-species transfer: the DEIS does not discuss the potential for transferring invasive aquatic species via the hydrostatic-testing equipment from one water body to another. Consequently, the equipment used during the hydrostatic test withdrawal and discharge should be thoroughly cleaned before being used at subsequent hydrostatic test locations to prevent any transfer of aquatic nuisance species to new locations. EPA recommends the FEIS discuss this potential and respectfully requests FERC to specify measures to prevent this water impact as a specific condition in the Commission's Order.

WETLANDS

- USFS concurrence: in the Apalachicola National Forest, the pipeline will be placed 15 feet from the nearest adjacent FGT pipeline rather that the normal 25-foot separation. EPA respectfully requests documentation of USFS concurrence, and if not currently available that FERC insures that USFS' concurrence is a specific condition in the Commission's Order.

- Pipeline placement: the placement of the pipeline 15 feet from the nearest adjacent pipeline in other sensitive wetland areas, EPA believes would reduce wetland impacts consistent with Executive Order (EO) 11990, *Protection of Wetlands,* which directs federal agencies to avoid adverse impacts to wetlands to the greatest extent possible. Consequently, EPA respectfully requests FERC add this mitigation measure as a specific condition in the Commission's Order.

- Right-of-way: when installing a 42-inch pipeline, the project would require a 75-foot wide right-of-way in saturated wetlands and a 100-foot wide right-of-way in unsaturated wetlands.[37] EPA believes that further avoidance and minimization of wetland impacts can occur, consistent with EO 11990, by requiring all installation be conducted within a 75-foot

[37] P. 2-9.

right-of-way. Consequently, EPA respectfully requests FERC add this mitigation measure as a specific condition in the Commission's Order.

- Monitoring period: the DEIS states that re-vegetated areas would be monitored for at least two years following construction to ensure successful restoration.[38] EPA recommends "temporary-impact" areas be monitored until these areas have reached pre-project function. In EPA's experience, two years is unlikely to be sufficient to determine this function. Additionally, the post-project function should be maintained for a pre-defined period of time (e.g., one growing season) to ensure success in attaining this function. Consequently, EPA respectfully requests FERC add this recommendation as a specific condition in the Commission's Order.

- Monitoring period: the appendix states that monitoring of wetlands will occur for the first three years after construction.[39] EPA believes the standard five-year monitoring period in wetland areas should be incorporated into this project. Consequently, EPA respectfully requests FERC add this mitigation measure as a specific condition in the Commission's Order.

- Permanent versus temporary impacts: the DEIS states the proposed action will result in temporary wetland impacts totaling 830 acres.[40] EPA believes impacts to forested wetlands located within 15 feet of the centerline of the pipeline should be considered permanent not temporary impacts and recommends the FEIS address these impacts.

- Permanent wetland conversion impacts: the DEIS states 94 acres of forested wetlands will be converted to emergent or scrub-shrub wetlands to facilitate pipeline inspection.[41] EPA believes any wetlands converted from one wetland type to another should be considered a permanent impact and recommends the FEIS address these impacts.

- UMAM scores: EPA recommends the FEIS include the Uniform Mitigation Assessment Method (UMAM) scores for the impacted wetland areas and proposed mitigation to offset the wetland impacts.

- Acreage correction: the DEIS states ... *about **94 acres** of forested wetlands (14 acres in Alabama and **94 acres** on Florida) would be maintained in a emergent or scrub-shrub state to facilitate periodic inspection of the pipeline ...*[42] and [t]*o facilitate maintenance and inspection of the pipeline, approximately **94 acres** of PFO wetlands (14 acres in Alabama and **94 acres in Florida**) would remain in the PSS or PEM state.*[43] EPA recommends the FEIS correct the number of acres (e.g., 94? 105?) where this misstatement occurs.

- Timber disposal: the DEIS states timber may be cut within the right-of-way and disposed of

[38] P. 4-13.
[39] P. 17, Appendix E-2.
[40] P. 4-48.
[41] P. 4-48.
[42] P. 4-48.
[43] P. 5-3.

by chipping slash and brush and leaving the chips on the right-of-way.[44] EPA believes leaving the chips in wetland areas may inhibit the re-growth of wetland vegetation. Consequently, EPA respectfully requests FERC prohibit this timber-disposal method in wetland areas, particularly sensitive areas, as a specific condition in the Commission's Order.

- Cumulative impacts: the cumulative wetland impact analysis for this DEIS (project) needs to be expanded to include all the other natural gas pipeline projects as outlined in Section 3.2, Systems Alternatives.[45] The cumulative impact analysis should also include the *Florida EnergySecure Line*, which is not included in the DEIS – see *Florida EnergySecure Line* comments in the above "Alternatives" section of this document.

- Wetland impact minimization: consistent with EO 11990's directive to avoid adverse impacts to wetlands to the greatest extent possible, EPA recommends that all wetland crossings be stabilized with mats prior to any crossing instead of allowing one physical crossing that determines whether it is feasible to cross any particular wetland without rutting. Additionally, EPA recommends the use of clay-seepage collars to support the pipeline instead of bedrock, which may act as a "*French-drain*" on the wetland system. Consequently, EPA respectfully requests FERC require all wetland crossings be stabilized with mats and clay-seepage collars be used as a specific condition in the Commission's Order.

- Wetland mitigation: all requirements contained in the Compensatory Mitigation for Losses of Aquatic Resources[46] should be met for this action. EPA respectfully requests the wetland/stream mitigation plan be finalized prior to the initiation of the CWA § 404 public notice process, to allow EPA to have all the necessary information required for the § 404(b)(1) review.

- Wetland mitigation: for those areas that will be temporarily disturbed, a functional assessment should be completed prior to initiation of work. In order for these areas not to be considered as impacted, pre-project function should be attained at the post-project phase. Should function not be restored then an "adaptive management" component should be included.[47] Consequently, EPA respectfully requests the functional assessment, pre-project function, and adaptive-management components be included as specific conditions in the Commission's Order.

OTHER

Essential Fish Habitat (EFH) -

- Permanent impacts: the DEIS states[48] that no permanent impacts to EFH would be expected.

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[44] P. 4-56.
[45] Pp. 3-5 to 3-16.
[46] 40 CFR 332.1-332.8.
[47] Defined at 40 CFR 332.2 and required by the Federal Mitigation Rule.
[48] P. ES-3.

Yet, the proposed action will require the continuous removal of woody vegetation (mangroves) within 15 feet of the gas pipeline, which will be a permanent impact to EFH. EPA recommends that the Executive Summary be revised to clearly reflect this as a permanent impact.[49]

- HDD impacts: the DEIS states that the use of HDD method to minimize wetland impacts in Loop 11 would actually increase impacts to mangrove habitat.[50] EPA recommends the FEIS provide detailed information which clearly outlines how the use of an HDD in this area would increase mangrove impacts. EPA's understanding was the use of HDD in this area would not require the removal of woody vegetation (mangroves) over the centerline of the pipeline; therefore mangrove impacts are should be greatly reduced over the life of the project. If this understanding is incorrect, the FEIS should clarify and offer alternatives avoiding mangrove impacts.

Energy Security & Climate Change

- Florida's Energy Security goal: because NEPA regulations require the environmental consequences section to include discussions of possible conflicts between the proposed action and the objectives of Federal, regional, State, and local land use plans, policies and controls for the area concerned,[51] the FEIS should discuss the proposed action's consistency with the State of Florida's goal: to diversify fuels used in the electric and transportation sectors to avoid overreliance on one fuel type. For example, the State's electrical sector forecasts project new generation capacity will be at least 80 percent natural gas-fired.[52]

  Additionally as an effort to improve integration of environmental impact statements into State or local planning processes, NEPA regulations,[53] require an EIS to discuss any inconsistency of a proposed action with any approved State or local plan and laws (whether or not federally sanctioned). Where an inconsistency exists, the statement should describe the extent to which the agency would reconcile its proposed action with the plan or law. Consequently, EPA recommends the FEIS address the perceived inconsistency with Florida's Energy Security goal and describe the extent FERC will reconcile its proposed action.

- Florida's Climate Change Action Plan: consistent with the reasons listed for the Florida's Energy Security goal comment above, the FEIS should discuss consistency of the proposed action as compared with State of Florida's Climate Change action plan,[54] which recognizes: changes in sea level are a concern because of Florida's geography. Climate change could negatively impact Florida's economy. Florida's greenhouse gas (GHG) emissions increased

[49] NEPA regulations, 40 CFR § 1502.12, require each environmental impact statement to contain a summary which adequately and accurately summarizes the statement.
[50] P. 3-28.
[51] 40 CFR § 1502.16.
[52] http://www.flclimatechange.us/ewebeditpro/items/O12F15281.pdf.
[53] § 1506.2(d).
[54] See f. n. # 46 and 48 above.

from 191 million metric tons (1990) to 252 million metric tons in 2003 with fossil fuel combustion accounting for 89 percent of Florida's GHG emissions.[55]

In 2005, the State's utility-sector's fossil-fuel GHG emissions comprised 42 percent of Florida's gross GHG emissions. Forecasts indicate that electric-utility generation will cause a 92-percent increase in natural gas requirements for the 10 year period: 2006 – 2016.[56] Florida's GHG emissions are rising faster than those of the nation as a whole: Florida's gross GHG emissions increased 35% compared with the Nation's 16% from 1990 to 2005.[57] By 2025, Florida's GHG emissions from energy-supply demand could increase by 24 percent and the GHG emissions associated with natural gas would exceed that of coal.[58]

Consequently, the State has determined a move toward early emissions reductions is clearly in its best interests. Accordingly, the Florida Department of Environmental Protection has initiated rule making to adopt a maximum allowable emissions level of GHG for electric utilities in the state.[59]

- Florida's Energy Plan: consistent with the reasons listed for the Florida's Energy Security Goal and Climate Change action plan comments above, the FEIS should discuss consistency with the State of Florida's 2006 Energy Plan.[60] In 2006, the Public Service Commission indicated that given the current capacity of FGT (i.e., completion of Phase VII) and Gulfstream, sufficient capacity currently exists to serve 2014 requirements. Yet, FGT is proposing Phase VIII while FPL is proposing its own intrastate EnergySecure Natural Gas pipeline. The FEIS should discuss these contradictions in context of both NEPA's regulatory requirements and the purpose and need for the proposed action.

Socioeconomics – Environmental Justice

- Conclusions lacking supporting information: EPA commends FERC's efforts to conduct a socioeconomic analysis; however, issues related to environmental justice remain to be addressed in the FEIS. For example, the DEIS provides no substantiating information to support its conclusion: there is no potential for disproportionate effects on minority and low-income populations. There appears to be no characterization of the demographic composition of all the counties traversed by the proposed pipeline corridor relative to the State Averages. No information within the section on racial composition and the information regarding poverty or low-income status appears to have been analyzed or compared to a broader State Average. Consequently, it is unclear whether the project crosses areas with substantial environmental justice population. EPA recommends these deficiencies be cured in the FEIS to appropriately assess potential impacts to environmental justice.

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[55] Phase 1 report
[56] Florida's Energy Plan, January 17, 2006, p. 21.
[57] http://www.flclimatechange.us/ewebeditpro/items/O12F20128.PDF
[58] Phase 2 report, chapter 3.
[59] Rule: 62-285.300 Electric Utility Greenhouse Reduction Program to cap GHG emissions from the electric utility sector, published date 5/1/09, Vol. 35/17 of FAW/FAC, see: https://www.flrules.org/gateway/ruleno.asp?id=62- 285.300
[60] http://www.floridadep.org/energy/energyact/files/2006_Energy_Plan.pdf

- Adequate public involvement: while the DEIS discusses the public involvement process, it does not discuss or assess efforts meaningful related to EJ populations. Because EJ populations do not routinely have Internet access, nor read the federal register, and may have their own newspapers, relying on traditional public outreach may not adequately provide public notice to theses communities. Meaningful public involvement is an essential component of an EJ analysis. An enhanced outreach effort to assure that EJ populations are engaged in the public participation process is important when there is a potential to affect areas with high EJ populations. These efforts help to identify and assess impacts and issues that are important to these communities. Furthermore, without clear demographic information related to the target population, it is difficult to meaningfully engage them in the public involvement process describe above. EPA recommends FERC reassess its public outreach methods to insure adequate public involvement of the appropriate environmental justice communities.

Editorial

- "SSLs" definition Absent: the EIS speaks to identifying "SSLs" that would be crossed by the Project[61] as part of the ERP process in Florida but does not appear to define what a "SSL" is in either the text or the in the Acronyms and Abbreviations list.

[61] P. 5-3.